



*Advancing Technology  
for Humanity*

# Region 5 From Strategic Planning to Operations

Ms. Lucy Talley on behalf of Dr John Santiago

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# Historical Strategic Goals



# Director Francis Priorities

Outcomes Based, What does success look like



# Director Sanderson Priorities

## Conditions and Culture: What must be true for success to happen?

1. Engage and utilize **Senior Members** through active recruitment for Section/Chapter activities and Section Leadership.
2. Develop and enhance **collaborative STEM** programs with schools, community organizations and industry partners to engage our Young Professionals in developing future engineers and leaders.
3. Ensure we welcome **all members** in IEEE to have a wide range of perspectives and experiences to build strong and embracing organizations for Branches, Chapters, Affinity Groups, Sections, and the Region.



Uses hands-on STEAM activities as entry mechanism to activate Region-level outcomes



# Pikes Peak Section, Vision, Mission & Strategic Goals

**Vision:** To be valued members in the community of the Pikes Peak Region as a recognized and engaged technical organization focused on:

- Professional growth
- Innovative and Viable Solutions
- Educational Outreach



**Mission:** To foster technological innovation and excellence and to contribute to the economic growth in the Pike's Peak Region

<https://r5.ieee.org/pikespeak/about-the-section/>

Posted Jul 2020, Photos Updated: 19 Dec 2022



## Strategic Goals

- Enhance professional skills
- Increase Member Engagement
- Assist improvement of workforce
- Invest in STEM education



# Director Sanderson Priorities

Conditions and Culture: What must be true for success to happen?

## 1. Panel 1: Leadership Continuity

Senior Members → Mentorship → Section Vitality

Engage and utilize **Senior Members** through active recruitment for Section/Chapter activities and Section Leadership.





# Director Sanderson Priorities

Conditions and Culture: What must be true for success to happen?

## 3. Panel 3 — Cultural Strength

Belonging → Trust → Sustainable Growth

Ensure we welcome **all members** in IEEE to have a wide range of perspectives and experiences to build strong and embracing organizations for Branches, Chapters, Affinity Groups, Sections, and the Region.



# Next Steps

How do we make it happen?

**Address this as a  
TEAM!**



# STEAM as a Catalyst: How do we make it happen?

- **STEAM** → **Mentorship** → **Continuity** → **Vitality** framing
- STEAM as a catalyst, mentorship as the multiplier, continuity as the mechanism, and vitality as the outcome
- Practical execution model that directly addresses the previous EXECUTION slide's questions around objectives, steps, cadence, metrics, and team-based execution.
- The framework enables Region 5 priorities to be met through decentralized action, light coordination, and sustained leadership capacity—precisely the kind of execution the 'EXECUTION' slide calls for.



# STEAM as a Catalyst: How do we make it happen?

- STEAM as a Center-of-Gravity to build leadership capacity
- Have well-established and mature sections share how their activities are meeting Region 5 priorities
- Reference example not mandate: Pikes Peak Section (PPS) has AI-assisted multi-media content and website is structured as a platform to document and meet Region 5 priorities



<https://r5.ieee.org/pikespeak/strategic-plan>



# Operations Manual: STEAM as a Center-of-Gravity (COG)

“How different sections are meeting Region 5 priorities in practice—given their local context or capacity.”

Proposed: Each quarter, we could highlight 2–3 sections to share practical lessons learned or best practices on how they’re meeting Region 5 priorities, creating a lightweight way to transfer execution knowledge and encourage collaboration across sections.”

This belongs squarely in the **operations layer**, because it:

- Transfers execution knowledge
- Builds leadership capacity across sections
- Reduces reinvention after leadership turnover
- Encourages collaboration without mandates

Decentralized execution with light centralized coordination



# Execute Operations Layer

**Section-to-section mentoring is not a new initiative.**  
It is an **operational execution pattern** that:

- ▶ Directly answers 'EXECUTION' slide
- ▶ Aligns with Region 5 priorities
- ▶ Scales leadership capacity
- ▶ Reference model: fits IEEE Pikes Peak Section body of work exactly (well established and mature sections will have similar patterns of leadership behavior)
  - <https://r5.ieee.org/pikespeak> and its constellation of mini-websites
  - Pyramid of Success, PyramidX-OS
  - STEAM-TEAMS monthly meetings (each member is empowered to Decentralized Execution, Centralized Coordination with low-cost logistic equipment-STEM kits)
  - KEEN Framework and Systems Engineering V-model
  - Leverage Cool Science ecosystem and other Partnerships



# Team Mentorship by LMAG Members

Colorado State University – Pueblo (CSU-Pueblo), Dec 2025

- ▶ [CSU-Pueblo | Leadership Memes from IEEE Pikes Peak Section](#)



[CSU-Pueblo Mini-site | IEEE Pikes Peak Section](#)



# Team Mentorship by LMAG Members

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AI use to  
3D-pixar



“Do not pray for easy lives. Pray to be stronger men.”

### 3 WAYS TO BE A STRONGER HUMAN

<b>Lead yourself first</b> You can't lead a team, a business, or a family—until you lead habits.	<b>Stand up for others</b> Strength isn't loud. It's quietly doing what's right—even when it's costly.	<b>Train your body</b> Physical strength reinforces mental toughness. Sweat.
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Check out the Pyramid mini website at: <https://lnkd.in/g/xhX8tEk>

[CSU-Pueblo Mini-site | IEEE Pikes Peak Section](#)



# Future City Colorado, 2023-2025

## Middle-School Students



# Mentorship by LMAG Member & YP

University of Colorado, Colorado Springs, Oct 2022

- ▶ [Community Outreach With UCSS](#)



# Mentorship by LMAG Members + Colorado Technical Student

United States Air Force Academy (USAFA), May 2019, Senior Capstone Project

- ▶ [Community Outreach with USAFA,](#)



# Execute Operations Layer

## Example of Pikes Peak Section, not Mandate

### ▶ Execution Layer

- Constellation of Mini-sites = documentation
- V-model = verification (do **we build leaders right** , can the pilots takeoff and land from a clear runway?)
- Acceptance/Qualification tests = validation (did **we build the right leaders**, can graduates/leaders navigate uncertainty, can the pilots, fly and navigate in bad weather or win in a dogfight)
- Dashboard metrics = leadership capacity measurement
- Mentorship ladder = propagation mechanism



# Execute Operations Layer

## System Engineering Development V-Model

### Execution Layer

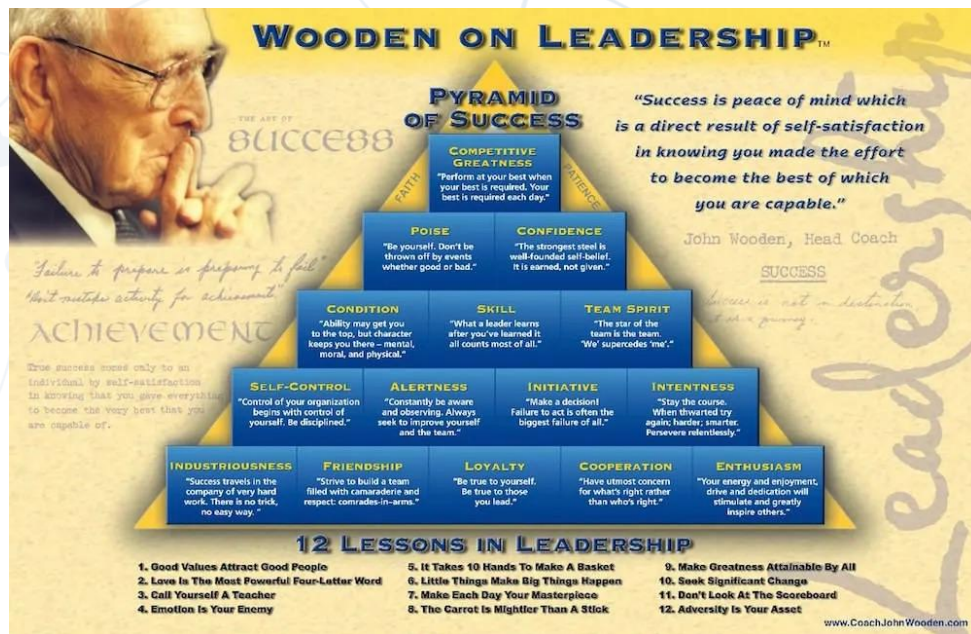
- ▶ STEAM functions as a capability-building engine, activating Senior Members, engaging Students and Young Professionals, and forming mentorship pipelines through decentralized, repeatable activities.
- ▶ The left side of the V-Model (Build Capability) represents intentional design and development: leadership activation, pipeline formation, and skill transfer embedded within normal section operations.
- ▶ The right side of the V-Model (Validate Impact) demonstrates measurable outcomes—retention, repeat volunteer participation, industry engagement, and leadership succession—confirming effectiveness through results rather than mandates.
- ▶ Pipeline Activation sits at the apex, linking capability creation to outcome validation by converting STEM collaboration into sustained leadership growth and membership continuity.
- ▶ Region 5 Vitality emerges, reinforcing that leadership vitality, membership conversion, and industry engagement - a closed-loop ecosystem driven by execution, not standalone initiatives.



# Possible 'AHA' Moments

Once sections hear from well-established sections:

- ▶ “Oh, Houston handled student → YP transition like *that*”
- ▶ “Pikes Peak low-cost logistical STEAM-TEAMS demos increasing volunteer activation by doing *this as empowered members to do community outreach*”
- ▶ “Central Texas partnered with industry using *that approach*”



# STEAM as a Center-of-Gravity

- **2–3 sections per quarter**

- small enough to manage

- large enough to show diversity of approaches

- **Best practices tied to Region 5 priorities**

- keeps it strategic, not anecdotal

- avoids “show-and-tell” without purpose

- **Quarterly cadence**

- aligns with volunteer reality

- allows learning to compound over time (long-term ripple effect)

- This becomes a **continuous learning loop**, not a one-off initiative



# Other Educational Initiatives (Optional, if it comes up)

Professional Development: EAB Education Week, ASEE STEAM conferences, and Try Engineering STEM summits

- 2024 Education Week: AI Speaker Series (5 speakers from Industry, 17 sections co-hosted), [2024 IEEE Education Week | IEEE Pikes Peak Section](#)
- 2025 Education Week:, [2025 IEEE Education Week – AI | IEEE Pikes Peak Section](#)
- 2025 ASEE Rocky Mountain Section Annual Conference: AI and STEM, [2025-RMS-ASEE Conference | IEEE Pikes Peak Section](#)
- IEEE Representative, presented paper at above ASEE Conference: **Igniting Entrepreneurial Mindsets through AI-Assisted STEAM Content Creation Using Camtasia**
- 2025 STEM Grant: **Empowering Tomorrow’s Leaders with STEAM-TEAMS**
- **2025 STEM Summit**: Region 5/PPS booth “Magnets, Motors, Microcontrollers and Monster Magic”: (50% conversion rate:33 email/65 visitors)

# Other Education Initiatives (Optional, if it comes up)

## Outreach

- Filipino-American Community of Southern Colorado (FACSC): Invited Keynote/Guest Speaker at 2025 Miss Fil-AM
- Invited Speaker to Sri Lanka Section: 2025 IEEE Day
- Supported 2025 Cool Science events, Fox Meadows Middle School, Space Foundation
- Cool Science Carnival Day, 27 Sep 2025
- Cool Science Festival, 27 Sep – 12 Oct (29 Sep, 6 Oct with many home school parents)
- Wrote over 20 news articles (jsantiago) at <https://r5.ieee.org/news> on AI and emerging technologies and its implications, leadership/mentorship